

Title (en)
MOLECULAR COMPUTER

Title (de)
MOLEKULAR-COMPUTER

Title (fr)
ORDINATEUR MOLECULAIRE

Publication
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Application
EP 00903361 A 20000120

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Abstract (en)
[origin: WO0044094A1] A molecular computer is formed by establishing arrays of spaced-apart input (12) and output pins (14) on opposing sides of a (10), injecting moleware (16) in solution into the containment and then allowing the moleware to bridge the input and output pins. Moleware includes molecular alligator clip-bearing 2-, 3-, and molecular 4-, or multi-terminal wires (30, 36, 40, respectively), carbon nanotube wires (80), molecular resonant tunneling diodes (32, 38), molecular switches (90), molecular controllers (42) that can be modulated via external electrical or magnetic fields, massive interconnect stations (44) based on single nanometer-sized particles, and dynamic and static random access memory (DRAM and SRAM) components composed of molecular controller/nanoparticle or fullerene hybrids (46). The current-voltage characteristics that result from the bridging between input and output arrays can be ascertained using another computer to identify the bundles of inputs and corresponding outputs that provide a truth table for the specific functions of the computer.

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